

**AMENDMENTS TO THE DRAWINGS:**

In FIG. 1, the word "3-ethyl-3-phenylmethyloxetane" has been replaced with --3-ethyl-3-phenoxyethyloxetane--.

Attachment: Marked-up copy of Figure 1 of the drawing  
Replacement Sheet

## **REMARKS**

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. § 1.111, and in light of the remarks which follow, are respectfully requested.

The specification has been amended to improve clarity and/or to correct typographical errors, in paragraphs [0008] and [0018], and Figure 1. These amendments are supported by the present specification, at least paragraphs [0043], [0044] and [0046].

Claim 1 has been amended to recite (C) in an amount of 0.01 to 10.0 % by weight based on 100 % by weight of the sum of the components (A) and (C), and to further recite that the composition does not contain an epoxy compound. These amendments are supported by the specification, at least paragraphs [0028] and [0004], and Examples.

Upon entry of the Amendment, claims 1-10 will be all the claims pending in the application.

### **I. Information Disclosure Statement**

Applicants have previously submitted a Form PTO-1449 along with an Information Disclosure Statement on June 22, 2006. The Examiner is respectfully requested to consider the cited references, initial and date the form and return a signed copy in the next PTO communication.

### **II. Response to Rejections under 35 U.S.C. § 102(b)**

a. Claims 1-4, 7 and 9 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Patent Document No. 2002-188025 to Yasuo et al. (JP '025).

Applicants respectfully submit that the present claims as amended are novel over JP '025 for at least the following reasons.

Claim 1 recites a cationic polymerizable resin composition comprising (A) a compound having at least one functional group capable of cationic ring-opening polymerization and (B) a cationic polymerization initiator to generate active species by electromagnetic wave or particle beam, which further comprises (C) a compound to generate a carbocation by the action of the active species generated from (B) the cationic polymerization initiator by electromagnetic wave or particle beam, in an amount of 0.01 to 10.0 % by weight based on 100 % by weight of the sum of the components (A) and (C), wherein the composition does not contain an epoxy compound.

The cationic polymerizable resin composition recited in claim 1 can provide excellent curability, comparable to that of a photo-radical polymerization system, without including an epoxy resin that causes skin stimulation.

Further, as described in paragraphs [0027] and [0028] of the present specification, the composition as defined in claim 1 can provide sufficient curability. Moreover, a decrease in water resistance and coloration of the resins do not occur in practical applications. As such, the composition recited in claim 1 is suitable for use in applications such as a sealing agent, an adhesive, a painting material, a coating material, an ink and a sealing material as defined in claims 5 to 10.

JP '025 discloses an active energy beam curable inkjet printing ink comprising a liquid component comprising (1) 10-50 wt% of an oxirane group-containing compound, (2) 50-90 wt% oxetane ring-containing compound and (3) 0-40 wt% of vinyl ether compound with (4) a pigment, (5) 0.2-20 wt% of a photo cationic polymerization initiator and (6) a

pigment dispersant. That is, the composition of JP '025 contains, as an essential component, an oxirane group (i.e., epoxy group)-containing compound.

In contrast, the composition recited in amended claim 1 does not contain an epoxy compound. As such, the composition as defined in claim 1 is different from that of JP '025. Thus, JP '025 does not disclose, or anticipate, claim 1.

In view of the foregoing, Applicants respectfully submit that claim 1 is not anticipated by JP '025, and thus the rejection should be withdrawn. In addition, claims 2, 3 and 5-10 depend from claim 1 and thus are novel over JP '025 at least by virtue of their dependency.

b. Claims "1-9" have been rejected under § 102(b) as being anticipated by Japanese Patent Document No. JP 08-085775 to Makoto et al. (JP '775)

As a preliminary matter, it appears that claims 1-6, 8 and 10, rather than claims 1-9, were rejected over JP '775 (page 2, lines 1-2 from the bottom of the Office Action).

Applicants respectfully submit that the present claims as amended are novel over JP '775 for at least the following reasons.

JP '775 discloses cationically curable compositions for coating/adhering to metal, comprising (A) a compound having 1-4 oxetane rings, (B) an epoxy compound, (C) a vinyl ether compound, (D) optionally a compound having a (meth)acrylic group and (E) a radical photopolymerization initiator. JP '775 does not disclose or exemplify a composition containing a cationic polymerization initiator by electromagnetic wave or particle beam, in an amount of 0.01 to 10.0 % by weight based on 100 % by weight of the sum of (1) a compound having at least one functional group capable of cationic ring-opening polymerization and (2) a compound to generate a carbocation by the action of the active species generated from a cationic polymerization initiator by electromagnetic wave or particle beam, as recited in claim 1.

Applicants submit herewith a Declaration under 37 C.F.R. § 1.132 by Mr. Yuichi Ito, a co-inventor of the present application. The Declaration demonstrates that the claimed composition containing 0.01 to 10.0 wt% of component (C) can provide unexpected results and thus further supports the patentability of claim 1.

In the Declaration, Examples 11 to 16 and Comparative Examples 4 and 5 were prepared in the same manner as described in Example 1 of the present specification. The formulations of Examples 11 to 16 and Comparative Examples 4 and 5 are summarized in the following Tables 1-1 and 2-1:

【Table 1 - 1】

	Name of Formulated Components	Examples					
		11	12	13	14	15	16
(A)	3-Ethyl-3-phenoxy methyl oxetane	97.0	99.0	99.9	97.0	99.9	95.0
	Bis(3-ethyl-3-oxetanylmethyl)ether						
(B)	RHODORSIL PHOTOINITIATOR 2074	1.6	1.6	1.6	1.6	1.6	1.6
(C)	Iso-butyl vinyl ether	3.0	1.0	0.1			
	1,4-butanediol divinyl ether						
	Iso-butoxy ethyl acetate				3.0	0.1	5.0

【Table 2 - 1】

	Name of Formulated Components	Comparative Examples	
		4	5
(A)	3-Ethyl-3-phenoxy methyl oxetane	85.0	85.0
	Bis(3-ethyl-3-oxetanylmethyl)ether		
	Phenyl glycidyl ether		
(B)	RHODORSIL PHOTOINITIATOR 2074	1.6	1.6
(C)	Iso-butyl vinyl ether	15.0	
	1,4-butanediol divinyl ether		
	Iso-butoxy ethyl acetate		15.0

Examples 11 to 16 and Comparative Examples 4 and 5 were then evaluated in terms of curability in the same manner as described in the present specification. In addition, Examples 11 to 16 and Comparative Examples 4 and 5, along with Examples 1-10 and Comparative Examples 1-3 described in the present specification, were evaluated in terms of coloration state in the manner described in the Declaration. The results are summarized in the following Table 3-1:

【Table 3 - 1】

Evaluation item	Examples															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Curability	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Coloration state	○	○	○	○	○	○	×	×	○	○	○	○	○	○	○	○
Remarks																

【Table 3 - 1】 continued

Evaluation item	Comparative Examples				
	1	2	3	4	5
Curability	×	×	△	○	○
Coloration state	-	-	○	△	△
Remarks	Not cured as in liquid state	Not cured as in liquid state	The cross section not cured		

As can be seen from the results in above Table 3-1, Comparative Examples 4 and 5, which contain, as the component C, iso-butyl vinyl ether and iso-butoxy ethyl acetate, respectively, in an amount of 15 parts by weight exceeding the recited upper limit of 10.0% wt%, showed light transmittances of not less than 80% and less than 90%.

In addition, Examples 7 and 8, which contain, as the component C, iso-butyl vinyl ether and iso-butoxy ethyl acetate, respectively, in an amount of 50 parts by weight which is also larger than the recited upper limit of 10.0 wt%, showed light transmittances of less than 80%. In contrast, Examples 1-6 and 9-16, which contain a component C in amounts ranging from 0.01 to 10.0 wt%, showed light transmittances of 90% or more.

In view of the foregoing, Applicants respectfully submit that present claim 1 is patentable over JP '775 and thus the rejection should be withdrawn. In addition, claims 2-6,

8 and 10 depend from claim 1 and thus are patentable over JP '775 at least by virtue of their dependency.

**III. Conclusion**


From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (202) 452-7932 at his earliest convenience.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: April 14, 2008

By: \_\_\_\_\_



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Fig. 1

